

CLAIMS

1 – Polyurethane foam spring mattress (1), characterised in that the main body is made from a single block of said material and is provided with a plurality of springs (5) of variable resistance to compression.

2 – Polyurethane spring mattress (1) according to the first claim characterised in that the springs (5) of said mattress are provided with spirals (5.1) that are shaped by cutting the aforementioned block with a specific machine and discarding the excess material.

3 - Polyurethane spring mattress (1) according to the first claim, characterised in that said springs (5) can be made up of different numbers of spirals (5.1) for different springs within a single mattress and are distributed in relation to the area of the mattress and the relative distribution of a person's weight, with the objective of varying the resistance to compression of said springs and therefore of the mattress.

4 - Polyurethane spring mattress (1) according to the first claim, characterised in that the springs (5) of said mattress have the shape of the trunk of a pyramid (9) and are provided with spirals (5.1) and are shaped by cutting a parallelepiped rectangular block of polyurethane foam by means of a specific programmable machine in two steps: a first step for shaping by means of a cutting blade manoeuvred by said machine, which covers the entire length or width of the polyurethane block, two first opposite faces of each spring (5) and partially, two platforms (6) into which all of the springs (5) of each mattress (1) are integrated, and a second step for shaping by means of the same cutting blade manoeuvred by said machine, which covers the entire length or width of the polyurethane block, a second pair of opposite faces adjacent to the first two faces and completely the two platforms (6) in which all of the springs (5) of each mattress are integrated, after turning said block 90° around a vertical axis, producing less than 1% of the material of the block as waste product since two essentially equal and complementary pieces are obtained.

5 - Polyurethane spring mattress (1) according to the first claim, characterised in that each spring (5) acts as a perfectly elastic part that, after being deformed under

the action of a force, recovers its original shape and position in a natural way once the action of said force has ceased.

- 5 **6** - Polyurethane spring mattress (1) according to the first claim, characterised
in that it is provided with a visco-elastic layer of polyurethane (3) and knit padding (2).